



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Dietrich et al.

Serial No.: 10/802,366

Filed: 3/16/2004

Title: Location of Wireless Nodes Using
Signal Strength Weighting Metric

Attorney Docket No.: 6561/53799

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Group Art Unit: 2683

Examiner: S. D'Agosta

Conformation No.: 3793

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

This Information Disclosure Statement is submitted:

- under 37 CFR 1.97(b), or
(Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- under 37 CFR 1.97(c) together with either a:
 - Statement under 37 CFR 1.97(e), or
 - a \$180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- under 37 CFR 1.97(d) together with a:
 - Statement under 37 CFR 1.97(e), and
 - a \$180.00 fee set forth in 37 CFR 1.17(p).
(Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)
- Statement under 37 CFR 1.97(e): Applicant states That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.

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Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

The relevance of the attached references is that this is the closest art of which Applicant is aware. Applicant submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

Applicant does not admit that the references, included in this Information Disclosure Statement, constitute prior art under the relevant statutes.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,

I hereby certify that this Correspondence is being deposited with the United States Postal service with sufficient postage for Express Mail No. EO918060993US, in an envelope address to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or the correspondence is being facsimile transmitted to the USPTO, on the date indicated below.

Date of Deposit: March 10, 2006

Typed Name: Anne M. O'Shea

Signature: A.M.O'Shea

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Date: March 10, 2006

Telephone No.: 415-826-7966

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EXAMINER NAME: S. Rampuria

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
	5,564,079	Oct. 8, 1996	Olsson			
	6,134,448	Oct. 17, 2000	Shoji et al.			
	6,112,095	Aug. 29, 2000	Wax et al.			
	6,115,605	Sep. 5, 2000	Siccardo et al.			
	6,140,964	Oct. 31, 2000	Sugiura et al.			
	6,198,935 B1	Mar. 6, 2001	Saha et al.			
	6,212,391 B1	Apr. 3, 2001	Saleh et al.			
	6,269,246 B1	Jul. 31, 2001	Rao et al.			
	6,275,190 B1	Aug. 14, 2001	Sugiura et al.			
	6,282,427 B1	Aug. 28, 2001	Larsson et al.			
	6,304,218 B1	Oct. 16, 2001	Sugiura et al.			
	6,415,155 B1	Jul. 2, 2002	Koshima et al.			
	6,249,252 B1	Jun. 19, 2001	Dupray			
	6,414,634 B1	Jul. 2, 2002	Tekinay			
	6,441,777 B1	Aug. 27, 2002	McDonald			
	6,526,283 B1	Feb. 25, 2003	Jang			
	6,556,942 B1	Apr. 29, 2003	Smith			
	6,272,541 B1	Aug. 7, 2001	Cromer et al.			
	6,664,925 B1	Dec. 16, 2003	Moore et al.			
	2005/0136944 A1	Jun. 23, 2005	Misikangas et al.			

EXAMINER

DATE CONSIDERED

*EXAMINER: initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to Applicant.

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U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
	2005/0131635 A1	Jun. 16, 2005	Myllymaki et al.			
	2005/0128139 A1	Jun. 16, 2005	Misikangas et al.			
	2004/0198373 A1	Oct. 7, 2004	Ford et al.			
	2004/0176108 A1	Sep. 9, 2004	Misikangas			
	2004/0111397 A1	Jun. 10, 2004	Chen et al.			
	2004/0072577 A1	Apr. 15, 2004	Myllymaki et al.			
	2003/0135486 A1	Jul. 17, 2003	Edlund et al.			
	2003/0130987 A1	Jul. 10, 2003	Edlund et al.			
	2002/0168958 A1	Nov. 14, 2002	Ford et al.			
	2002/0118118 A1	Aug. 29, 2002	Myllymaki et al.			
	2002/0115445 A1	Aug. 22, 2002	Myllymaki			
	2002/0102988 A1	Aug. 1, 2002	Myllymaki			
	6,704,352	03/2004	Johnson, Mitchell K.			
	6,754,488	06/2004	Won et al.			
	6,243,811 B1	Jun. 5, 2001	Patel			
	6,728,782 B1	Apr. 27, 2004	D'Souza et al.			
	6,766,453 B1	Jul. 20, 2004	Nessett et al.			
	2002/0176366 A1	Nov. 28, 2002	Ayyagari et al.			
	6,456,892	Sep. 24, 2003	Dara-Abrams et al.			
	6,581,000	Jun. 17, 2003	Hills et al.			
	2002/0174335	Nov. 21, 2002	Zhang et al.			
	2003/0117985 A1	Jun. 26, 2003	Fujii et al.			

INFORMATION DISCLOSURE STATEMENT

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SHEET 3 OF 7.

	2003/0135762 A1	Jul. 17, 2003	Macaulay		
	5,394,158 A	02-1995	Chia, Si T.S.		
	5,666,662 A	09-1997	Shibuya, Toshiyuki		
	6,140,964 A	10-2000	Sugiura, et al.		
	6,167,274 A	12-2000	Smith, Adrian Donald		
	6,236,365 B1	05-2001	LeBlanc, et al.		
	6,226,400 B1	05-2001	Doll, Joseph		
	5,396,582 A	03-1995	Kahkoska, James		
	2004/0151377 A1	08-2004	Boose, et al.		
	5,028,848	07-1991	Bankston, et al.		
	2004/0186847 A1	09-2004	Rappaport, et al.		
	2004/0259554 A1	12-2004	Rappaport, et al.		
	2004/0259555 A1	12-2004	Rappaport, et al.		
	2004/0154134 A1	10-2002	Matsui, Nobuaki		
	6,804,394 B1	10-2004	Hsu, Shin-yi		
	6,850,946 B1	02-2005	Rappaport, et al.		
	2004/0236547 A1	11-2004	Rappaport, et al.		
	4,254,467	03-1981	Davis, et al.		
	6,134,338 A	10-2000	Solberg, et al.		
	6,317,599 B1	11-2001	Rappaport, et al.		

INFORMATION DISCLOSURE STATEMENT
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FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION YES NO
	EP 0 930 514 A2	Jul. 21, 1999	EPO	G01S	5/14	
	EP 0 967 816 A1	Dec. 29, 1999	EPO	H04Q	7/34	
	EP 1 018 457 A1	Jul. 12, 2000	EPO	B60R	25/10	
	EP 1 296 531 A1	Mar. 26, 2003	EPO	H04Q	7/38	
	WO 02/43425 A1	May 30, 2002	PCT	H04Q	7/38	
	EP 1 301 055 A1	Apr. 09, 2003	EPO	H04Q	7/38	
	JP 02044929	Feb. 14, 1990	Japan	H04B	7/26	
	WO 02/054813 A1	Jul. 11, 2002	PCT	H04Q	7/38	
	WO 03/023443 A2	Mar. 20, 2003	PCT	G01S	5/00	
	WO 97/33386	Sept. 12, 1997	PCT	H04Q	7/20	
	WO 98/41048	Sept. 17, 1998	PCT	H04Q	7/34	
	WO 99/08909	Feb. 25, 1999	PCT	B60R	25/10	

OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, Place of Publication, Etc.)

	"Ekahau Logical Areas-location enabling the Wi-Fi network." April 4, 2003. Ekahau, Inc., Saratoga, CA. Company's URL: www.ekahau.com
	"Ekahau Positioning Engine 2.0: Product Overview." April 4, 2003. Ekahau, Inc., Saratoga, CA. URL: http://www.ekahau.com/products/positioningengine/
	"Ekahau Positioning Engine 2.0: Data Sheet." April 04, 2003. Ekahau, Inc., Saratoga, CA. URL: http://www.ekahau.com/pdf/EPE_2.0_datasheet.PDF
	"Indoor Positioning in 802.11b Networks." April 04, 2003. Ekahau, Inc., Saratoga, CA. URL: http://www.ekahau.com/products/positioningengine/features.html
	"InFielder." April 22, 2003. Wireless Valley, Austin, TX. URL: http://www.wirelessvalley.com/Products/InFielder/InFielder.asp

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

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ART UNIT: 2688	EXAMINER NAME: S. Rampuria	

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SHEET 5 OF 7.

CN	"LANFielder." April 22, 2003. Wireless Valley, Austin, TX. URL: http://www.wirelessvalley.com/Products/LANFielder/LANFielder.asp
	"Optimatic." April 22, 2003. Wireless Valley, Austin, TX. URL: http://www.wirelessvalley.com/Products/Optimatic/Optimatic.asp
	"Predictor." April 22, 2003. Wireless Valley, Austin, TX. URL: http://www.wirelessvalley.com/Products/Predictor/Predictor.asp
	"LANFielder Product Literature." February 10, 2004. Wireless Valley, Austin, TX. URL: http://www.wirelessvalley.com/Assets/brochures/LanFielder.pdf
	Conley, C.. "Securing WLANS with Location-Enabled Networks." <i>Wireless Security Perspectives</i> , Vol.5, No.3.March, 2003. Organization's URL: www.cnp-wireless.com/wsp.html
	"Company Information." April 6, 2004. Corsair Communications:A LightBridge Company, Burlington, MA. Company's URL: www.lightbridge.com
	"Corporate Fact Sheet." Aruba Wireless Networks, San Jose, CA. February 10, 2004. URL: http://www.arubanetworks.com/pdf/corporate_fact_sheet.pdf
	"Airwave Rogue Access Point Detection." 2002. Airwave Wireless, Inc. San Mateo, CA. URL: http://airwave.com/features.html
	Geier, J. "Identifying Rogue Access Points." January 6, 2003. Wi-Fi Planet Tutorials. URL: http://www.wi-fiplanet.com/tutorials/article.php/1564431
	Brewin, B. "IBM Develops Tool to Detect Rogue Wireless LAN Access Points." June 17, 2002. Computerworld, Framingham, MA. URL: http://www.computerworld.com/mobiletopics/mobile/story/0,10801,72065,00.html
	Bulusu, N., Heidemann, J., Estrin, D. "GPS-less Low Cost Outdoor Localization for Very Small Devices." <i>IEEE Personal Communications</i> , October 2000. URL: http://lecs.cs.ucla.edu/~bulusu/papers/Bulusu00a.pdf
	"AeroScout WLAN Location System." Downloaded on November 10, 2003 from http://www.bluesoft-inc.com/wlan.asp Bluesoft, Inc., San Mateo, CA.
	"Cognio Announces Breakthrough Location Technology for WLAN Deployments." Downloaded on November 10, 2003 from http://www.cognio.com/press_detail.asp?itemID=70 Cognio, Inc., Waltham, MA.
	"WhereNet Main Page." Downloaded November 10, 2003 from http://www.wherenet.com/ WhereNet, Santa Clara, CA.
	Small, J., Smailagic, A., and Siewiorek, D.P. "Determining User Location For Context Aware Computing Through the Use of a Wireless LAN Infrastructure." Institute for Complex Engineered Systems. Carnegie-Mellon University, Pittsburgh, PA, 2000. Available at http://www-2.cs.cmu.edu/~aura/docdir/small100.pdf .
	Kishan, A., Michael, M., Rihan, S., and R. Biswas. "Halibut: An Infrastructure for Wireless LAN Location-Based Services." Technical paper for Course CS444n, Computer Science Department, Stanford University, Stanford CA, June 2001. Previously available at http://fern2.stanford.edu/cs444n/paper.pdf .
	Bahl, P. and Padmanabhan, V.N. "RADAR: An In-Building RF-based User Location and Tracking System." <i>IEEE Infocom 2000</i> , vol. 2, Mar. 2000, pp. 775-784.

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(Use several sheets if necessary)

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GROUP

ART UNIT: 2688

EXAMINER NAME: S. Rampuria

a1.FORM - 1449

SHEET 6 OF 7.

	"Positioning in Wireless Networks Reference." Downloaded on July 28, 2005 from http://binary.engin.brown.edu/ . BINARY Group, Division of Engineering, Brown University, Providence, RI. Available online at http://binary.engin.brown.edu/publication/Positioning_Ref.pdf
	Chirumamilla, Mohan K. and Ramamurthy, Byrav. "Agent Based Intrusion Detection and Response System for Wireless LANs." IEEE Int'l Conference on Communications, 2003, Vol. 1, pp. 492-496.
	"IBM Research Demonstrates Industry's First Auditing Tool for Wireless Network Security." July 12, 2001, Hawthorne, N.Y. IBM RESEARCH NEWS, 'Online. URL: http://domino.research.ibm.com/comm/pr.nsf/pages/news.20010712_wireless.html
	"IBM Researchers Demonstrate Industry's First Self-Diagnostic Wireless Security Monitoring Tool." June 21, 2002, Hawthorne, N.Y. IBM NIEUWS, 'Online! URL: http://domino.research.ibm.com/comm/pr.nsf/pages/news.20020617_dwsa.html
	"Assessing Wireless Security with AiroPeek and AiroPeek NX." A WildPackets Academy Tutorial from www.wildpackets.com , WildPackets Inc., Walnut Creek, CA. January 16, 2003. URL: http://www.wildpackets.com/elements/whitepapers/AiroPeek_Security.pdf
	"AiroPeek and Wireless Security: Identifying and Locating Rogue Access Points." A WildPackets Academy Tutorial from www.wildpackets.com , WildPackets Inc., Walnut Creek, CA. January 16, 2003. URL: http://www.wildpackets.com/elements/whitepapers/RogueAccessPoints.pdf
	Craiger, J. P. "802.11, 802.1x, and Wireless Security." June 23, 2002. From the SANS' Information Security Reading Room on www.sans.org , The SANS Institute, Bethesda, MD. URL: http://www.sans.org/rr/papers/68/171.pdf
	Baily, S. "Is IEEE 802.1X Ready for General Deployment?" April 7, 2002. From the SANS' Information Security Reading Room on www.sans.org , The SANS Institute, Bethesda, MD. URL: http://www.sans.org/rr/papers/9/709.pdf
	"Location Determination Papers", List of publications maintained by Moustafa A. Youssef, Department of Computer Science, University of Maryland, College Park, MD 20742. Available online, and downloaded February 9, 2006 at http://www.cs.umd.edu/~moustafa/location_papers.htm
	"Positioning in Wireless Networks Reference" BINARY Group, Division of Engineering, Brown University, Providence, RI 02912, Available online, and downloaded February 9, 2006 as binary.engin.brown.edu/publication/Positioning_Ref.pdf
	L.M. Ni, Y. Liu, Y.C. Lau and A.P. Patil. "LANDMARC: Indoor Location Sensing Using Active RFID." Proceedings of the First IEEE International Conference of Pervasive Computing and Communications 2003 (PerCom '03).
	G. Wolfle, R. Wahl, P. Wertz, P. Wildbolz and F. Landstorfer. "Dominant Path Prediction Model for Indoor Scenarios." German Microwave Conference (GeMIC) 2005, Ulm (Germany), April 2005 Paper.
	P. Wertz, G. Wolfle, R. Hoppe, D. Zimmermann and F.M. Landstorfer. "Enhanced Localization Technique within Urban and Indoor Environments based on Accurate and Fast Propagation Models." European Wireless, 2002, Florence, Italy.

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SHEET 7 OF 7.

	STEVEN FORTUNE, "Algorithms for prediction of indoor radio propagation", sjf@research.att.com, January 7, 1998, Bell Laboratories, Murray Hill, New Jersey 07974,
	A. RAJKUMAR, B.F. NAYLOR, F. FEISULLIN AND L. ROGERS, "Predicting RF Coverage in Large Environments using Ray-Beam Tracing and Partitioning Tree Represented Geometry", submitted to the ACM Journal of Wireless Networks after revision on October 12, 1995, AT&T Bell Laboratories, Murray Hill, NJ 07974.
	REINALDO A. VALENZUELA, STEVEN FORTUNE, and JONATHAN LING, "Indoor Propagation Prediction Accuracy and Speed Versus Number of Reflections in Image-Based 3-D Ray-Tracing", 1998, Bell Laboratories, Lucent Technologies, Holmdel, NJ 07733
	Office Action from U.S. Patent Application No. 10/848,276, the application which was filed on May 18, 2004, entitled "Wireless Node Location Mechanism Featuring Definition of Search Region to Optimize Location Computation"
EXAMINER	DATE CONSIDERED

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